

In the Claims:

A detailed listing of the claims is provided, below.

1. (Original.) A composite comprising a metallic substrate, a substantially amorphous and substantially non-porous aluminophosphate film and a component therebetween, said component comprising a phosphate group in bonded interaction with an oxide of a metal component of said substrate.
2. (Original.) The composite of Claim 1 wherein said aluminophosphate film comprises an aluminum content selected from less than stoichiometric, greater than stoichiometric and stoichiometric, said content relative on a molar basis to phosphorous.
3. (Original.) In the composite of Claim 1 further comprising nanoparticles selected from carbon and a metal compound.
4. (Original.) The composite of Claim 1 wherein said substrate is a steel alloy and said oxide is selected from an iron oxide and a chromium oxide.
5. (Original.) The composition of Claim 1 wherein said film has a thickness dimension of about 0.05 micron to about 10 microns.
6. (Original.) The composition of Claim 5 wherein said film has a thickness dimension from about 0.1 micron to about 1.0 microns.
7. (Original.) The composition of Claim 5 further including an organic component on said film.
8. (Original.) The composition of Claim 5 wherein said film is opaque.
9. (Original.) A high-temperature stable composition comprising an aluminophosphate compound, said compound substantially amorphous, and carbon nanoparticles therein.
10. (Original.) The composition of Claim 9 further including nanoparticles of a metal compound.
11. (Original.) The composition of Claim 9 wherein said aluminophosphate compound comprises an aluminum content selected from less

than stoichiometric, greater than stoichiometric and stoichiometric, said content relative on a molar basis to phosphorous.

12. (Original.) The composition of Claim 11 wherein said aluminophosphate compound has an aluminum content greater than stoichiometric.

13. (Original.) The composition of Claim 9 comprising a coating on a substrate.

14. (Original.) A high-temperature stable, substantially amorphous aluminophosphate compound, said compound having an aluminum content relative to said phosphorous, said compound substantially absent chloride ion.

15. (Original.) The compound of Claim 14 further including carbon nanoparticles.

16. (Original.) The compound of Claim 14 further including nanoparticles of a metal compound.

17. (Original.) The compound of Claim 14 wherein said aluminum content is selected from less than stoichiometric, greater than stoichiometric and stoichiometric, said content relative to phosphorous.

18.-21. (Canceled.)

22. (Original.) A composite comprising a metallic substrate and a substantially amorphous, substantially non-porous aluminophosphate film on said substrate, said composite having a surface energy of about 32 mJ/m².